

WHAT IS CLAIMED IS:

1. A software download system for downloading a communication software from a download center with which a communication apparatus is  
5 connected via a communication line, wherein  
the communication apparatus comprises:  
a software storage unit which stores the communication software;  
a request information generating unit which generates request information indicating at least a status of the communication apparatus by  
10 recognizing the status of the communication apparatus;  
a request information transmitting unit which transmits the request information to the download center;  
a software receiving unit which receives the communication software transmitted from the download center;  
15 a software rewrite control unit which rewrites contents of the software storage unit with the received communication software; and  
a communication unit which executes the stored communication software, and  
the download center comprises:  
20 a software accumulating unit which accumulates different kinds of communication software;  
a request information receiving unit which receives the request information of the communication apparatus;  
a software selecting unit which selects a suitable communication  
25 software from the software accumulating unit in accordance with the received request information; and  
a software transmitting unit which transmits the selected

communication software to the communication apparatus.

2. The software download system according to claim 1, wherein  
the communication unit has a function of receiving broadcast, and  
5 the communication software is a receiving software.

3. The software download system according to claim 2, wherein  
the communication unit has a function of receiving different kinds of  
broadcast, and

10 the communication apparatus further comprises a received broadcast  
switching unit which switches the kind of broadcast received by the  
communication unit.

4. The software download system according to claim 1, wherein  
15 the communication unit has a function of the mobile communication  
apparatus.

5. The software download system according to claim 1, wherein  
the communication apparatus further comprises a request  
20 information transmission judging unit which judges whether or not the  
request information should be transmitted to the download center.

6. The software download system according to claim 1, wherein  
the download center further comprises a software transmission  
25 judging unit which judges whether or not the selected communication  
software should be transmitted to the communication apparatus.

7. The software download system according to claim 1, wherein  
the communication apparatus further comprises a position  
information acquiring unit which acquires a position information of the  
communication apparatus, and

5 the request information generating unit makes the request  
information include the position information, and wherein

the download center further comprises a community information  
database, and

10 the software selecting unit refers to the community information  
database based on the position information included in the request  
information and selects a suitable communication software in consideration  
of a communication environment based on the position of the  
communication apparatus.

15 8. A communication apparatus comprises:

a software storage unit which stores communication software;

a request information generating unit which generates request  
information indicating at least a status of the communication apparatus by  
recognizing the status of the communication apparatus;

20 a request information transmitting unit which transmits the request  
information to a download center;

a software receiving unit which receives the communication software  
transmitted from the download center;

25 a software rewrite control unit which rewrites contents of the software  
storage unit with the received communication software; and

a communication unit which executes the stored communication  
software.

9. The communication apparatus according to claim 8, wherein the communication unit has a function of receiving broadcast, and the communication software is a receiving software.

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10. The communication apparatus according to claim 9, wherein the communication unit has a function of receiving different kinds of broadcast, and

the communication apparatus further comprises a received broadcast switching unit which switches the kind of broadcast received by the communication unit.

11. The communication apparatus according to claim 8, wherein the request information generating unit generates request information to make a request for communication software with a high precision of arithmetical operation that can receive a receiving signal at excellent sensitivity, when the power level of the receiving signal is different from the supposed power level for the current communication software.

12. The communication apparatus according to claim 8, wherein the request information generating unit generates request information to make a request for communication software with the high synchronizing performance, when the receiving signal is likely to be out of synchronization.

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13. The communication apparatus according to claim 8, wherein the request information generating unit generates request

information to make a request for communication software optimal to a unique information, when the unique information for the receiving signal is obtained.

- 5     14.     The communication apparatus according to claim 8, wherein  
         the request information generating unit generates request  
information to make a request for communication software suitable for  
removal of the multipath, when the multipath disturbance is recognized.
- 10    15.     The communication apparatus according to claim 8, wherein  
         the request information generating unit generates request  
information to make a request for communication software with a higher  
ability of correcting errors, when the receiving signal has a high Bit Error  
Rate.
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16.     The communication apparatus according to claim 8, wherein  
         the request information generating unit generates request  
information to make a request for communication software with a decoding  
program suitable for a multiple signal, when the information indicating that  
20    the receiving signal is the multiple signal is obtained.
17.     The communication apparatus according to claim 8, further  
comprising a position information acquiring unit which acquires position  
information of the communication apparatus, wherein  
25     the request information generating unit generates request  
information including the position information.

18. The communication apparatus according to claim 10, wherein  
the request information generating unit generates request  
information to make a request for communication software adaptable to the  
broadcast to be received, when the received broadcast switching unit  
5 switches the received broadcast.
19. The communication apparatus according to claim 10, wherein  
the request information generating unit generates request  
information to make a request for communication software for receiving data  
10 broadcasting at the same time, when the communication unit has a small  
amount of signal processing for receiving broadcast.
20. The communication apparatus according to claim 8, further  
comprising a request information transmission judging unit which judges  
15 whether or not the request information should be transmitted to the  
download center.
21. The communication apparatus according to claim 20, wherein  
the request information transmission judging unit judges whether or  
20 not the status of the communication apparatus is adaptable to the current  
communication software based on the generated request information.
22. The communication apparatus according to claim 8, wherein  
the request information includes software information of the current  
25 communication software of the communication apparatus.
23. The communication apparatus according to claim 8, wherein

the communication apparatus has a function of a mobile communication apparatus.

24. A download center comprises:

5 a software accumulating unit which accumulates different kinds of communication software;

a request information receiving unit which receives request information of a communication apparatus;

10 a software selecting unit which selects a suitable communication software from the software accumulating unit in accordance with the received request information; and

a software transmitting unit which transmits the selected communication software to the communication apparatus.

15 25. The download center according to claim 24, wherein

the download center further comprises a software transmission judging unit which judges whether or not the selected communication software should be transmitted to the communication apparatus.

20 26. The download center according to claim 25, wherein

the software transmission judging unit recognized the software information of the current communication software of the communication apparatus based on the received request information, and

25 the software transmission unit transmits the selected communication software to the communication apparatus, when the selected communication software is judged to be different from the communication software installed in the communication apparatus.

27. The download center according to claim 24, wherein  
the download center further comprises a community information  
database,

5 the software selecting unit refers to the community information  
database based on the position information of the communication apparatus  
included in the received request information, and selects a suitable  
communication software in consideration of the communication environment  
based on the position of the communication apparatus.

10 28. An information recording medium on which a communication  
program is recorded so as to be readable through a computer which is  
contained in a communication apparatus with a pre-installed re-writable  
recording medium, and which causes the computer to function as:

15 a software storage unit which stores a communication software;  
a request information generating unit which generates request  
information indicating at least a status of the communication apparatus by  
recognizing the status of the communication apparatus;

20 a request information transmitting unit which transmits the request  
information to a download center;

a software receiving unit which receives the communication software  
transmitted from the download center;

a software rewrite control unit which rewrites contents of the software  
storage unit with the received communication software; and

25 a communication unit which executes the stored communication  
software.



29. The information recording medium according to claim 28, wherein  
the communication apparatus does not perform the operation other  
than rewriting the communication software, while the communication  
apparatus is rewriting contents of the software storage unit with the received  
5 communication software.

30. A communication apparatus comprises:

a software storage unit which stores different kinds of communication  
software;

10 a request information generating unit which generates request  
information indicating at least a status of the communication apparatus by  
recognizing the status of the communication apparatus;

a software selecting unit which selects communication software  
suitable for the status of the communication apparatus from the software  
15 storage unit based on the generated request information; and

a communication unit which executes the selected communication  
software.

31. An information recording medium on which a communication  
20 program is recorded so as to be readable through a computer which is  
contained in a communication apparatus with a pre-installed re-writable  
recording medium, and which causes the computer to function as:

a software storage unit which stores different kinds of communication  
software;

25 a request information generating unit which generates request  
information indicating at least a status of the communication apparatus by  
recognizing the status of the communication apparatus;

a software selecting unit which selects communication software suitable for the status of the communication apparatus from the software storage unit based on the generated request information; and

5 a communication unit which executes the selected communication software.